

**Summary Notes
CALFED Bay-Delta Program
Levee and Channel Technical Team Meeting
December 10, 1996**

Introductions and Announcements

Curt Schmutte of the California Department of Water Resources (DWR) announced the December 17, 1996 Public Workshop in Walnut Grove. An agenda for the workshop should have been sent to the team members. The workshop will feature a panel of experts discussing habitat improvement on levees.

Curt Schmutte reported that he submitted a draft work plan for the levee and channel technical team to CALFED staff. This work plan is available to the team.

The next levee and channel technical team meeting will be Tuesday, January 7, 1997, from 1:00-4:00 p.m. in Sacramento, California. The meeting location will be determined soon. The team is scheduled to present information on the levee and channel work at the January 30, 1997 Bay-Delta Advisory Council (BDAC) meeting.

Land Subsidence Subteam

At the last levee and channel technical team meeting, Steve Deverel from DWR talked about the relationship between long-term subsidence and farming practices. The subteam found that although crop burning was a source of subsidence for a time, oxidation is now the primary source of long-term subsidence. Steve Deverel will finalize the results from the subteam's work and distribute them to the entire team.

The subsidence mitigation and control plan will be a topic at the next levee and channel technical team meeting. The plan will include maps that show areas critical for subsidence control and will make recommendations for controlling subsidence in those areas. The subteam will present mapped information on depth of peat, percent organic matter, historic subsidence rates, and other geotechnical information.

Seismic Susceptibility Subteam

Mike Driller of DWR distributed a status report and discussed progress of the seismic susceptibility subteam. The testing of how peat soil reacts to seismic activity is ongoing. Preliminary results from the University of California at Berkeley lab dynamic response analysis indicate that peat soil acts like other clays by amplifying motion. The team discussed how these results do not support some previous experience with peat soils where the soils dampen motion under seismic conditions. Additionally, field testing has been updated by installing new accelerometer sites in the Delta and updating equipment at existing sites. The accelerometer sites are selected to represent a range of peat soil thickness and underlying materials (e.g., sand versus clay) and are located in the western Delta (closer to earthquake centers) on DWR or other public

property that permits long-term access and maintenance.

Levee-Associated Habitat Subteam

Curt Schmutte reported that the team received funding for a levee habitat demonstration project on Sherman Island. The project will use adaptive management techniques to investigate what habitats are viable on and adjacent to island levees.

CALFED Levee Program

The CALFED levee program includes a base level of funding (i.e., subventions) for all Delta islands and special-project funding for certain islands to meet various goals or objectives. The Delta island prioritization process applies only to special-projects funding and does not affect the base level funding for all islands.

The Delta island prioritization process focuses on the benefits provided by the levee system. The benefits will be used to prioritize the islands for special-projects funding. Need for levee improvement will be addressed during implementation.

As a technical team, we are presenting technical solutions and will not be making the policy decisions. The team's goal is to reach consensus on the facts as opposed to addressing the relative importance of one goal over another.

Special Projects - Delta Island Prioritization

Ken Casaday, CALFED consultant, presented the process used by staff to rank the Delta islands by objective. The team generally agreed with the process used to prioritize islands but had specific concerns about the data in the island matrix. The following section lists the team's specific comments on the data set. The responses to comments are in italic type.

Process

Normalize the data and use an unweighted system of normalized data to rank the islands by objective.

Staff will present the revised base data and normalized data to the team at the January meeting. The islands will be ranked using both the threshold method and unweighted normalized data rankings.

Where we have no data, a ranking should not be assigned.

Staff has revised the process so that no rank is given where no data is available.

Revise the spreadsheet so it is obvious which criteria causes an island to be ranked 'high'. Also, show the islands in descending order (not alphabetically).

The spreadsheet will be reformatted to indicate an island's rank for each criteria and islands will be shown in descending order by normalized data.

Rank the islands into five or six categories (not just 3).

The island rankings will be presented at the next meeting.

The technical team should point out synergies or sensitivities in the rankings to CALFED.

The technical team will present this kind of information to BDAC and CALFED along with our other findings.

Project Area

We need to define the geographic focus of this analysis. Is the focus the legal Delta or something greater? For example, would Suisun Marsh be eligible for special projects funding?

The geographic focus of the Delta island prioritization is lowlands within the legal Delta as defined in the Delta Atlas. The data set is being revised to incorporate all reclamation districts in this area.

Winter Island is a separate reclamation district and should not be linked with Brown's Island.

The data set has been revised to include Winter Island as a separate entry.

Walnut Grove (RD 554) is separate from Tyler Island and should be addressed as a separate island.

Walnut Grove has been added to the data set as a separate island.

Separate Roberts Island into individual islands (middle, lower, upper).

The data set has been revised to separate Roberts Island.

Data Sources and Accuracy

Use DWR crop inventory, not the U.S. Army Corps of Engineers (Corps) data, for agricultural lands. Determine the value of agricultural lands by distinguishing row crops from permanent crops and assigning an average value per acre.

Staff is revising the data for agricultural lands using the DWR crop inventory and is contacting team members to determine an average value for row and permanent crops.

Adjacent islands. This category is not well represented by the current "adjacent acreage at risk" information. We need to find a way to capture seepage risk and wind fetch. One option is to

look at adjacent levee mileage. This requires making assumptions regarding the risk to levees bordering large waterways and how seepage in different parts of the Delta (e.g., central, north, south) vary.

Staff will contact the commenters (Chris and Gil) to develop assumptions and explore ideas to capture this objective.

Subsidence will affect island volumes over time, so the island ranking for the water quality objective should be revised periodically to reflect that the system is not static. Also, the current data should be updated based on 1978 U.S. Geological Survey topographic maps.

In the information presented to BDAC, the team will note the need to update island volumes and most other criteria over time.

The time of an island breach and the hydrological conditions at that time will greatly affect the water quality and water volume changes. We should be using mean high water instead of sea level to determine island volumes. For example, if the rate of filling a breached island is less than the rate of outflow, there will be no noticeable water quality effect.

The data set will indicate the hydrologic conditions that need to exist to create an adverse short-term water quality condition. Because those conditions are generally not floodstage conditions, mean high water does not need to be used to determine island volumes.

Hydrologic modeling of long-term water quality changes should be conducted for all islands, not just for those we think may create a water quality problem.

We will use the existing data set for the island prioritization. If more data is required by the decision-makers, hydrologic modeling can be conducted for more Delta islands.

The Corps' Stockton Ship Channel bay model may have more information on water quality effects of levee breaches.

Staff will contact the Corps regarding this information.

The recreation use days and recreation resources shown do not look accurate. For example, Little Venice Island does not have a State or county park, McCormick-Williamson does not have a State park, and the State park on Brannan Andrus is outside the levee system. The recreation information should also include information on private recreation facilities (e.g., duck clubs).

The data on recreation use and recreation resources is being updated based on comments from the team and communication with the Delta Protection Commission, Department of Fish and Game, and private recreation groups (e.g., Ducks Unlimited).

The listing of county roads ("present" or "absent") should be consistent with the information provided for State or federal highways (miles). The importance of a State or federal highway is its

presence or absence because if one section of road (no matter how long) is affected by a levee breach, the road is impassable.

The data set has been revised to note the presence or absence of State and federal highways.

The information on natural gas resources should separate the presence of fields from storage to ensure that the important storage areas are reflected in the data set.

Staff is coordinating with Pacific Gas & Electric (PG&E) to update our information on gas storage and pipelines.

Information on listed historic and prehistoric sites should be used for cultural resources. The data need to be updated.

Staff will coordinate with the U.S. Bureau of Reclamation on listed sites in the project area.

Other Issues

Mitten crab invasions can affect levee stability by burrowing and increasing erosion. How will this be addressed in the levee program?

The mitten crab issue is more detailed than the island prioritization process but will be addressed by the levee habitat subteam.

What is the reliability of export water given levee failure potential?

The potential effect on water reliability is addressed in the special-projects funding objectives; water quality is one of the objectives listed for island prioritization.

Action Items

Staff will present more information on the subsidence mitigation and control plan at the next technical team meeting.

Staff will reorganize and update the information matrix based on the comments received and revise the special projects rankings.

The next meeting of the levee and channel technical team will be January 7, 1997, 1:00 p.m. at 1416 Ninth Street, Room 1601.

Participants

Curt Schmutte (chair), DWR
Bill Forsythe, DWR
Ann Marie Parkin, DWR

Bill Croyle, CVRWQCB
B.J.Miller, SCVWB
Victor Pacheco, CALFED
Robert Mott
Robert Clark, Central Valley FCA
Ken Casaday, Jones & Stokes
Aimee Dour (minutes), Jones & Stokes
Mike Driller, DWR
Les Harder, DWR
Jim Goodwin, USBR

Gary Falxa, USFWS
Matt Vandenberg, USFWS
Ray McDowell, CALFED
Margit Aramburu, Delta Protection Commission
Steve Deverel, DWR
Gilbert Cosio, Murray Burns & Kienlen
Christopher Neudeck, Kjeldsen, Sinnock, & Nuedeck
Tom Zuckerman, CDWA
Frank Gray, DFG
Lynn O'Leary, Corps of Engineers